

The Impact of the Housing Sector On the Washington Area Economy

Prepared for

Metropolitan Washington Council of Governments

Washington Area Housing Partnership

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March 2001

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Housing is a major variable in the regional economy. This economic importance can be demonstrated in several distinct ways—as a source of construction jobs, as investment or cash value, as a place for the labor force to live and therefore a growth constrain within the economy, and as an alternative source of consumer spending. Each of these dimensions can be viewed in a positive light; that is, as generating value in the economy and contributing to the economy's gross regional product (the value of goods and services produced locally). However, each of these dimensions has a negative side with housing potentially representing a constraint to the economy's achieving its full growth potential or representing a diversion of spending away from sectors of the economy having greater job and income effects. These different economic dimensions of housing are explored here as the basis for understanding the importance of housing to the long-run growth and vitality of the Washington area economy.

Housing as a Source of Direct Jobs

In 2000 the construction sector had 185,700 jobs, including both self-employed and "covered" workers and accounted for 5.45 percent of all employment in the Washington metropolitan area (PMSA). These jobs produced total personal earnings of \$7.2 billion and other income flows totaling \$1.4 billion combining to account for 3.67 percent of the area's gross regional product (GRP). These construction workers represent the industry-wide workforce with residential construction accounting for 55 percent or 102,135 jobs and a \$4.7 billion contribution to GRP.

While as a source of jobs the construction sector can not be considered a major industry and construction employment is also the most cyclically sensitive within the area's total job base, construction jobs have been among the fastest growing during the last half of the 1990s. Between 1995 and 2000, the construction sector added 33,000 net new jobs for a five-year increase of 19.5 percent. This gain was double the 9.7 percent increase achieved by the total employment base in the metropolitan area. And, with

average annual earnings of \$38,640, construction jobs provide among the highest incomes for workers not having an advanced academic education.

Investment Value of the Housing Stock

Homeownership has long been a national goal. The rationale supporting this goal has been both social and economic. The principal economic benefit of homeownership is the accumulated value that the house represents over time with it becoming the largest single asset for most American families. Rental properties represent the same kind of investment value as owner-occupied housing. However, rather than the asset being owned by the occupying household, it is owned as a business for the purpose of generating a return on the investment or capital value of the unit. In both cases, these housing units represent the outlay of capital and the value of these assets can be calculated based on their market value, investment value, or replacement value.

The existing housing stock represents a substantial "cash" value to its owners. This investment value can be calculated by multiplying the number of units in the owner-type housing stock by its average or mean value and the number of units in the rental-type housing stock by its average "market" value. The aggregate value of these two market segments represents the asset value of the region's housing stock. It also represents the real property baseline or assessed value that local governments depend on for their largest single source of tax revenue.

For the MSA, the estimated 1,078,000 housing units in the ownership stock (owner-occupied and vacant units) in 2000 had an estimated average (mean) per unit value of \$185,568 (in year 2000 dollars). This average value was developed from the 1998 Annual Housing Survey by using the mid-points of value classes multiplied by the number of units in each class. For the top value class, which is open ended, its value was set at the bottom value of \$300,000 so as not overstate the results. This average 1998 value of \$179,537 expressed in 2000 dollars equaled \$185,558. An estimated total investment value of \$200.042 billion was calculated by applying this average unit value to the total ownership stock,

The MSA's rental stock totaled an estimated 669,795 occupied and vacant units in 2000. The calculation of this stock's total value involved establishing an average value for the different quality classes of apartment units for buildings with 20 or more units as

follows: Class A at \$100,000 per unit; Class B at \$55,000 per unit; and Class C at \$30,000 unit. For rental buildings with fewer than 20 units the average unit value was estimated at \$42,500. In total, all rental units were valued at \$32.466 billion in 2000.

The estimated market value of the Washington metropolitan area housing stock-in 2000 totaled \$232.5 billion. This is the cash value that the 1.75 million housing units would realize if they were all sold. This value would be close to the assessed valuation of this stock for tax purposes assuming real estate assessments are current and reflected fair market value.

This cash or investment value should not be confused with replacement value. This value would be substantially greater as the current cost of replicating the existing housing stock would be based on current labor and materials costs. Older housing incorporates degrees of functional obsolescence that, if rebuilt to today's standards, would be corrected with a commensurate increase in cost and quality. The presence of this older, less expensive housing, whether rental or ownership, constitutes the primary source of units priced at levels that households with below-average incomes can afford and, thus, provides an alternative to the overpayment for housing services.

Housing As A Source of Economic Growth

The region's housing units define the region's households. These households generate personal earnings and account for a substantial portion of the spending associated with the consumption of goods and services produced by the regional economy. The Washington metropolitan area (PMSA) had an estimated 1.834 million households in 2000 with an average (mean) household income (in 2000 \$s) of \$102,800 (this income includes payroll earnings and transfers such as dividends, rents, social security and pension funds). These households, based on their number and income, generated \$188.5 billion of the Washington area's \$233.2 billion GRP in the year 2000.

To evaluate the economic contribution of accommodating new households (or not being able to accommodate new households) involves calculating the economic value associated with the growth of housing in one year as a percentage of the growth in the economy for that same year. For the year 2000, the Washington area economy is estimated to have grown by \$10.72 billion from 1999. It is also estimated that the area added 23,240 new households. Using the average (mean) household income of \$102,800,

and adjusting spending to reflect its total contribution to GRP, these new households contributed \$2.856 billion to the economy. That is, the metropolitan area economy was able to expand by an additional \$2.856 billion beyond what the existing households and related business base would have generated had these new households not been housed in the Washington area. Rather than the economy (GRP) growing at 4.82 percent in 2000, it would have only gained 3.5 percent in the absence of these new households. These new households added 2.6 percent to the total value of the area's GRP or 1.3 percentage points to the total growth rate.

Using these values, it can be argued that for each additional new household in the Washington area, the economy (GRP) will expand by \$122,864 plus the indirect effects of this spending (multiplier effect = 1.72). It can also be stated that for each new household unable to find housing, and therefore not moving to the Washington area, the regional economy loses \$122,864 plus the economic impacts gained from the re-spending of these funds within the local economy or \$211,326. This cost is the first year impact and it will accumulate annually thereafter. Therefore, the opportunity cost of a tight and over-priced housing market can be measured as jobs not filled and income and output not generated for each year that these conditions persist with these costs accumulating over time.

This calculation probably overstates the size of the economic contribution of "new" households as it could be argued that "new" households would not have as great an average household income as the existing household base in the Washington area. Still, the principle is important. A housing unit is more than its replacement cost or investment value. It represents a unit of work and output within the regional economy. Increasingly, this unit of work in the Washington area involves more than one employee. It also represents a demand for goods and services provided by local businesses and the household's spending helps create and support jobs in these residentially related businesses.

A shortage of housing, besides having a price effect that makes housing more expensive and diverts consumer spending from non-housing to housing outlays (see following section), could also inhibit the growth of the region's economy. For each potential new household not being housed in the region, the fully loaded opportunity cost to the economy is in excess of \$200,000 annually. However, if these households choose

to locate outside of the metropolitan area in order to find suitable and affordable housing and commute back to the area for work each day, the total opportunity cost will be less. Still, besides contributing to increased transportation demand and highway congestion, the consumer spending associated with these non-resident workers will be largely lost from the Washington area economy as consumer spending tends to take place in proximity to their place of residence.

In 2000, the residential adjustment for the calculation of gross regional product—the net dollar value lost to the area economy due to non-local workers taking their payroll home with them—totaled \$7.78 billion. Had all of the region's workforce resided within the metropolitan area, its 2000 GRP would have totaled \$240.98 billion rather than \$233.2 billion, a difference of 3.3 percent. The economic consequences of the growing inability to house the area's workforce is seen in the projected increase in this residential adjustment—it increased 25.5 percent between 1990 and 2000 and is projected to grow 36.7 percent between 2000 and 2010.

Economic Impact Of Over-Paying For Housing

Housing affordability has always been an issue in the Washington housing market. Affordability becomes a problem when housing prices exceed an acceptable percentage of a household's disposable income. When confronted by high housing prices relative to household incomes, households determined to reside in the Washington metropolitan area have two options: pay a disproportionately large amount of their income to secure the required housing or pay less and secure lower quality or less adequate housing. The general affordability conditions in the Washington metropolitan area have been established in the companion report (Metropolitan Washington Area Housing Trends, 1990-2000).

Using the results of the American Housing Survey (1998) and applying these percentages to the entire metropolitan area housing stock, the number of households that are overpaying for their housing and the amount that they are overpaying can be calculated. For rental housing, in 1998, an estimated 213,500 households, 37.5 percent of all rental households, were paying in excess of 30 percent of their household income for rent. The accumulated value of this overpayment was \$743.9 million. For owner households, 213,400, or 21.1 percent, were paying in excess of 30 percent of their income

for housing. The total value of this overpayment was \$1.22 billion. This combined overpayment for housing in 1998 was of \$1.96 billion; in year 2000 dollars, this was equivalent to \$2.028 billion.

This \$2 billion represents spending that is not generating its full economic benefit within the regional economy; that is, its multipliers and resultant jobs and income are not being maximized. This overpayment for housing is reducing the effected households' spending for retail and other local purchases of goods and services. For example, this overpayment for housing (mortgage and rent payments) has a multiplier of 1.206 and 2.3 new jobs per million dollars, while the output multiplier for retail trade is 1.73 and 28.4 jobs per million dollars in new spending. If all of this overpayment for housing had been spent in the retail trade sector, it would have supported the creation of 56,800 new jobs where its spending within the housing sector supports only 4,600 jobs for a difference of 52,200 jobs. The impact of this overspending on the area's GRP is the difference between the output multipliers times \$2 billion or $.524 \times \$2 \text{ billion}$ or \$1.048 billion. This \$1 billion is the cost to the Washington area economy of this diversion of consumer spending for the overpayment for housing and the resulting foregone spending for retail trade.

Conclusions

The housing sector constitutes an important component of the Washington area's economy. It is a source of construction jobs, consumer spending for both housing related products and services, of investment and income, and of economic output and contribution to gross regional output. In its most simple form, the importance of housing is the growth force in the region's economy.

Besides being a major source of spending, which has been estimated to account for two-thirds of the national economy (GDP), households represent a central part of the economy's capacity to produce goods and services. Households generate output and earn income as well as produce profit and other business outlays. The ability to house the area's workforce and meet its growing labor force requirements determines the economy's ability to expand. Any shortage of housing has the potential impact of constraining the economy's ability to realize its full growth potential.

Beyond accommodating new households and labor resources, the cost of housing also impacts the growth of the economy. Annual household spending for housing has different impacts on job and income generation than household spending for other products and services. The greater the diversion of consumer income to housing and away from retail and other consumer goods, the greater the magnitude of unrealized local economic activity.

The shortage of housing has other economic impacts besides constraining labor resources and total earnings. Housing shortages contribute to inflationary price increases necessitating households to allocate a higher share of earnings for housing with concomitant decreases in other forms of consumer spending. Besides diverting income to less economically productive uses, higher housing prices places a burden on lower income households that can not afford the cost of securing decent housing.

The range of economic impacts and costs associated with the Washington area housing sector are summarized on the following table. Ranging from the sector's annual construction value to its annual contribution to the economy as a by-product of housing new labor resources to fill the area's new jobs to its aggregate investment value, housing has been shown to be a major component of the economy and potential constraint to its growth. While the provision of housing has this range of economic impacts, the absence or shortage of housing also represent costs; that is, economic growth not realized.

These unrealized benefits add up to significant values. These costs can be described in two distinct ways reflecting two types of economic impact: (1) supply constraints raise the cost of housing and therefore its occupants pay more for housing and in return spend less for some other consumer good; and (2) supply constraints and high housing costs may discourage households from living within the Washington metropolitan area even though they may continue to work within the area. Just the cost of overpayment, that is, paying more than 30 percent of annual household income for housing, has been shown to cost the area economy 52,200 jobs and \$1 billion in GRP. If housing costs were lower in general across all income levels, the gains from shifting consumer spending from housing to retail trade would even be greater. One measure of this impact is the loss of GRP due to area workers choosing to live outside the Washington metropolitan area. In 2000, this cost the economy \$7.8 billion or 3.3 percent of GRP.

Economic Impacts of the Housing Sector
in the Washington Metropolitan Area, 2000
(in year 2000 dollars)

Type of Impact	Magnitude of Impact
New Housing Construction	
Annual Construction Jobs	102,135 jobs
Annual Contribution to GRP*	\$4.7 billion
Household Value To GRP*	
Direct Contribution Per Unit	\$122,864
Total Contribution Per Unit	\$211,326
Direct GRP Contribution of New Households	\$2.86 billion
Total GRP Contribution of New Households	\$4.92 billion
Investment Value of the Housing Stock	\$232.5 billion
Costs of Housing Supply Shortage	
Lost GRP* to Non-Resident Workers	\$7.78 billion
Cost of Over-Payment for Housing	\$2.03 billion
Net Impact of Consumer Spending	
Diversion to Housing From Retail Sales	
Job Impact of Spending Diversion	- 52,200 jobs
GRP* Impact	- \$1 billion

*GRP = gross regional product

The individual economic and social costs of overpaying for housing and their aggregate consequences have a very real impact of the economy's ability to grow and realize its full growth potential. Knowing the magnitudes of the economic costs of not having a sufficient supply of housing should change the focus of the housing discussion from one of solely social benefits to one that gives full recognition to the long-term economic benefits of a strong housing sector.